90 THINGS YOU **NEED** TO KNOW

TO BECOME AN EFFECTIVE **CTO**

eBook powered by **CTO** ACADEMY

CTO Academy launched in 2019 and we have since worked with technology leaders in 98 countries, helping them to enhance their leadership skills, expand their network and fast track their career impact.

With the CTO role meaning so many different things to different people (and organisations) this is a guide that has to be generic in its nature but it's a collection of personal insights and hard won perspectives gathered from our global network of technology and business leaders.

We hope you find it an interesting read but please get in touch with any thoughts, feedback or pushback.

It's how we've been iterating CTO Academy since 2019.

Andrew Weaver
CEO

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SECTION 1

PERSONAL GROWTH

KNOW THYSELF, DO WHAT YOU LOVE

There is a reason why this topic heads our eBook and early lectures on our executive leadership course because if you don't know yourself, then you're going to struggle to deliver authentic leadership.

And leadership comes more naturally when individuals are able to find alignment and flow between their career and their values.

What does **your** definition of success look like?
What drives your intrinsic motivation?

Another angle around this topic comes from Paul Graham who wrote about the false friend that is "prestige":

"What you should not do is worry about the opinion of anyone beyond your friends. You shouldn't worry about prestige. Prestige is the opinion of the rest of the world. When you can ask the opinions of people whose judgement you respect, what does it add to consider the opinions of people you don't even know?

This is easy advice to give, hard to follow, especially when young. Prestige is like a powerful magnet that warps even your beliefs about what you enjoy. It causes you to work not on what you like, but what you'd like to like.

It's what leads people to try to write novels. They like reading novels. They notice people who write them win Nobel prizes. What could be more wonderful than be a novelist? But liking the idea is not enough; you have to like the actual work of novel - writing if you're going to be good at it.

Prestige is especially dangerous to the ambitious. If you want to make ambitious people waste time on errands, the way to do it is bait the hook with prestige. That's the recipe for getting people to give talks, write forewords, serve on committees, be department heads, and so on. It might be a good rule simply to avoid any prestigious task. If it didn't suck, they wouldn't have had to make it prestigious"

DISCOVER YOUR CORE VALUE

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So, the next step is to ask if you understand your core values?
Have you or how do you identify your intrinsic motivation?

Have you ever put your own feet to the fire and explored the values that matter most to you as an individual?

Because many people don't ... they think they know, they build their career around what they think they know, but rarely drill down deep enough to find out.

Once you do understand your core values and from that your instrinsic motivation, they should always remain central to every job move and career decision you make.

Want to explore your core values?

We have a test within our course that helps you drill down into your core 3-5 values, though there are lots of online tests you can explore.

What's interesting when people take a genuine interest in finding out, is that they're often surprised with what they find about themselves.

They're often surprised to discover their **true** core values.

CELEBRATE SMALL WINS

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Jeff Bezos talks about taking 10 years to become an overnight success.

We're all building things and it can be a slow, daunting challenge to achieve the success we crave.

So it's important to keep a note of the small wins that aggregate over time into a sense of real achievement, for yourself and your team.

FIND YOUR TRIBE

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The CTO has a very different career trajectory to other executive leaders as they have to execute that transition from being highly technical to the more hybrid skill set required in senior leadership roles.

Indeed for CTOs in larger organisations, the role becomes almost entirely strategic (and political) so the transition is even more stark.

You might also find yourself becoming increasingly isolated in senior leadership roles, particularly when surrounded by non-technologists on the board.

Therefore you need to develop a trusted network of peers who can help to reduce any sense of isolation and provide you with an important sounding board.

We don't know many effective leaders who don't have access to a supportive community and a like minded tribe.

STAY CURIOUS

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As a technologist you're always learning — new technologies, new version of a language, new frameworks etc.

When you move into leadership roles this process of acquiring new technological expertise can drop away particularly with more demands on your time.

So you have to develop a broader perspective about how to gain new knowledge and often that's about the discipline of creating the time for yourself to grow.

For many who lead, that means creating the space to read.

Warren Buffett and Bill Gates famously consume huge amounts of reading material to maintain their edge and it's a theme that effective leaders protect some of their working time, as reading time.

It's where the art of delegation becomes important — not just to offload tasks and upskill your direct reports, but to buy you the time you need to read, study and strategise.

Your role as a senior tech leader is to understand what's coming over the horizon and how that might impact the business.

You can't do that by sitting behind a keyboard.

WHAT ROLE FOR AMBITION?

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"Ambition is desire frozen, the current of a vocational life immobilised and over-concretised to set unforgiving goals" — David Whyte, *Consolations*

Everyone we deal with at CTO Academy is ambitious but it must always be balanced with a holistic approach to finding the right work:life balance.

No matter how ambitious you are or how great the demands placed upon you, never lose focus on the importance of carving out time for you, and for those you love.

We are social creatures.
To live a full life, we need to maintain tender connections with people who are important to us.

So, take care of your relationships, as well as your career.

"A life's work is not a series of stepping stones onto which we calmly place our feet, but more like an ocean crossing where there is no path, only a heading, a direction, in conversation with the elements. Looking back, we see the wake we have left as only a brief glimmering trace on the waters" - David Whyte
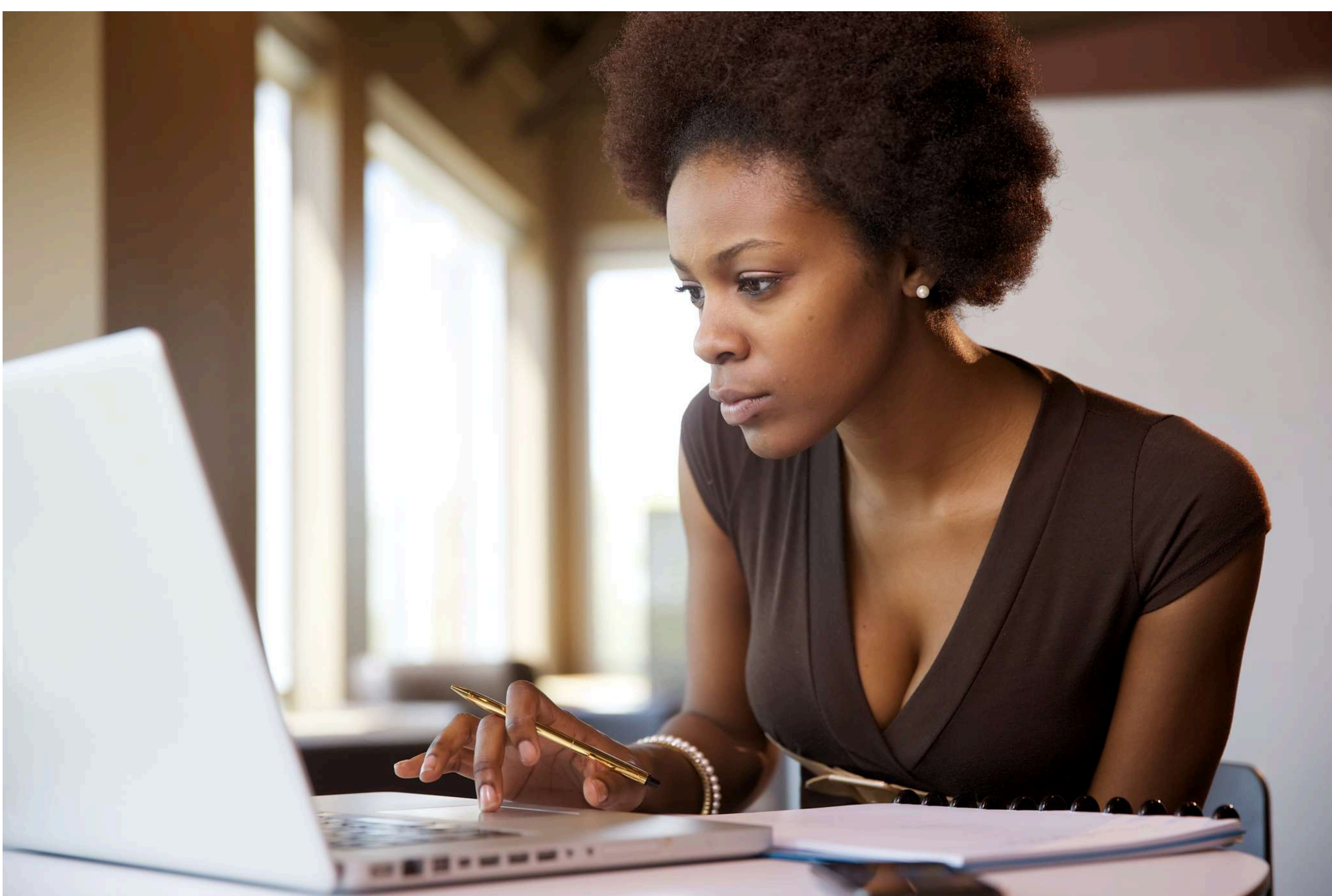
SECTION 2

MANAGEMENT & TIME

MOVING FROM TECHNICAL TO LEADERSHIP

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Moving into a senior technology role is unlike the equivalent move into marketing, sales or finance.

With other c-suite roles there is generally an organic learning path where the skills you acquire through your career can be directly carried into the senior level.

The leap from technologist to tech leader is often more challenging as having spent most of your working lives in front of a screen you now have to shift into a whole new soft skill landscape.

One example is the art of delegation.

We have members of our senior team who still struggle with delegation - the engineer in them wants to continue overseeing every detail.

They're used to getting under the bonnet of the technology so it's a mindset shift to step away and delegate, particularly if you still think you can do it better.

But to meet the demands and expectations of a leadership role, then you have to do it.

In the CTO role you're paid to focus on higher value tasks.

Spending hours conducting a code review is probably not a good use of time, perfecting the architecture of a new product probably is.

STRATEGIC THINKING

The issue that comes up with many of those joining CTO Academy is an understanding that they need to become more strategic.

Expectations of the CTO are that they need to develop a vision that anticipates future trends and opportunities, helping to prepare the organisation for any significant changes ahead.

Strategic thinking and being able to communicate a technology vision across the company in a language that resonates with all stakeholders, is one of the key responsibilities for any effective CTO.

LEAD WITH COMPASSION

Recognise that colleagues' behaviour and performance might sometimes be affected by external pressures.

Managing team dynamics requires an understanding of how and when people perform at their best and what might be the issue behind any sub-standard performance.

Learn how to spot signs of burnout and to maintain an open-door policy that encourages staff to feel comfortable discussing issues affecting their work.

Managing through the pandemic and the remote/hybrid era brought new leadership challenges particulalry around the pastoral care of your team.

No one is perfect — all of us suffer times of stress and distraction so it's important that compassion is at the core of your leadership approach.

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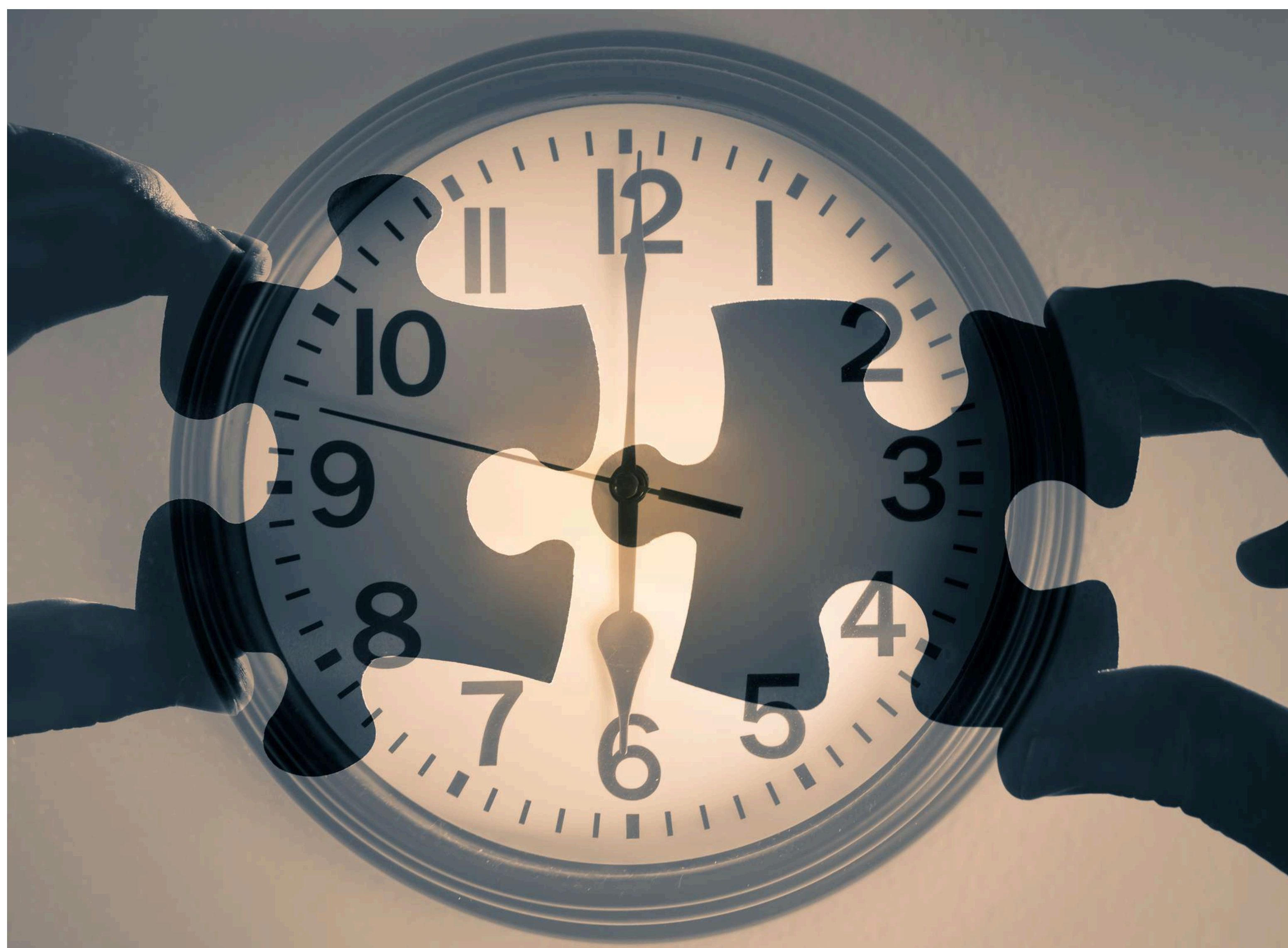
THE ART OF SAYING NO

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No is a simple word, but with many challenging applications.

As a developer you might view the word as anathema to progress.

As a leader understand when it's needed to protect yourself and your team.

You might need to deploy it when manage the expectations of customers and perhaps the CEO, pressuring you to achieve the impossible.

Learn how and when to apply it to a product rather than allow something through that is sub-standard.

If you've built a team and a culture based on trust and honesty, then the word becomes less loaded because it's viewed as a mechanism for review, rather than a tool for confrontation.

LEARNING TO MANAGE THE CEO

The CEO:CTO dynamic is not only crucial to success but it's also the relationship that many CTOs find difficult to manage.

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Your ability to work with the CEO will impact directly on your ability to deliver but even here within our team at CTO Academy it can be challenging not least due to very different personalities and perspectives.

Often the challenge is simply to manage our optimism.
Used in a focused way then optimism can be a driving force and inspiration, but for some CEOs their optimism is sometimes delusional and can be destructive.

To soften their more extravagant whims of fancy, the c-suite often need to play a role that challenges and/or calms a situation. You might have to become the voice of tech reason within these discussions.

PRODUCTIVITY TRICKS

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You don't have the luxury of time you used to have.
Alongside delegation you need to master the art of effective time management.

You may already have a favourite productivity trick.

One of ours is **"Eating the frog"**, which allegedly stems from an Amazonian tribe who claimed: **"eat a frog at the start of the day, everything else is plain sailing"**.

The productivity frog is the item you're most likely to procrastinate on and least likely to complete.

When organising your day, get the nasty task(s) out of the way early - don't leave them to gnaw away at the back of your mind.

The Eisenhower Matrix is another used by some of our team.

## PUT THOSE DISTRACTIONS AWAY

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Obvious but still worth emphasising.

Give yourself a break now and then.

Turn off notifications, go on a social media detox, have software that blocks it out for a period of time and aim to have at least one day of the weekend tech-free.

You might feel you've lost a limb, but you'll soon get a sense of liberation — that's if our experiences are anything to go by
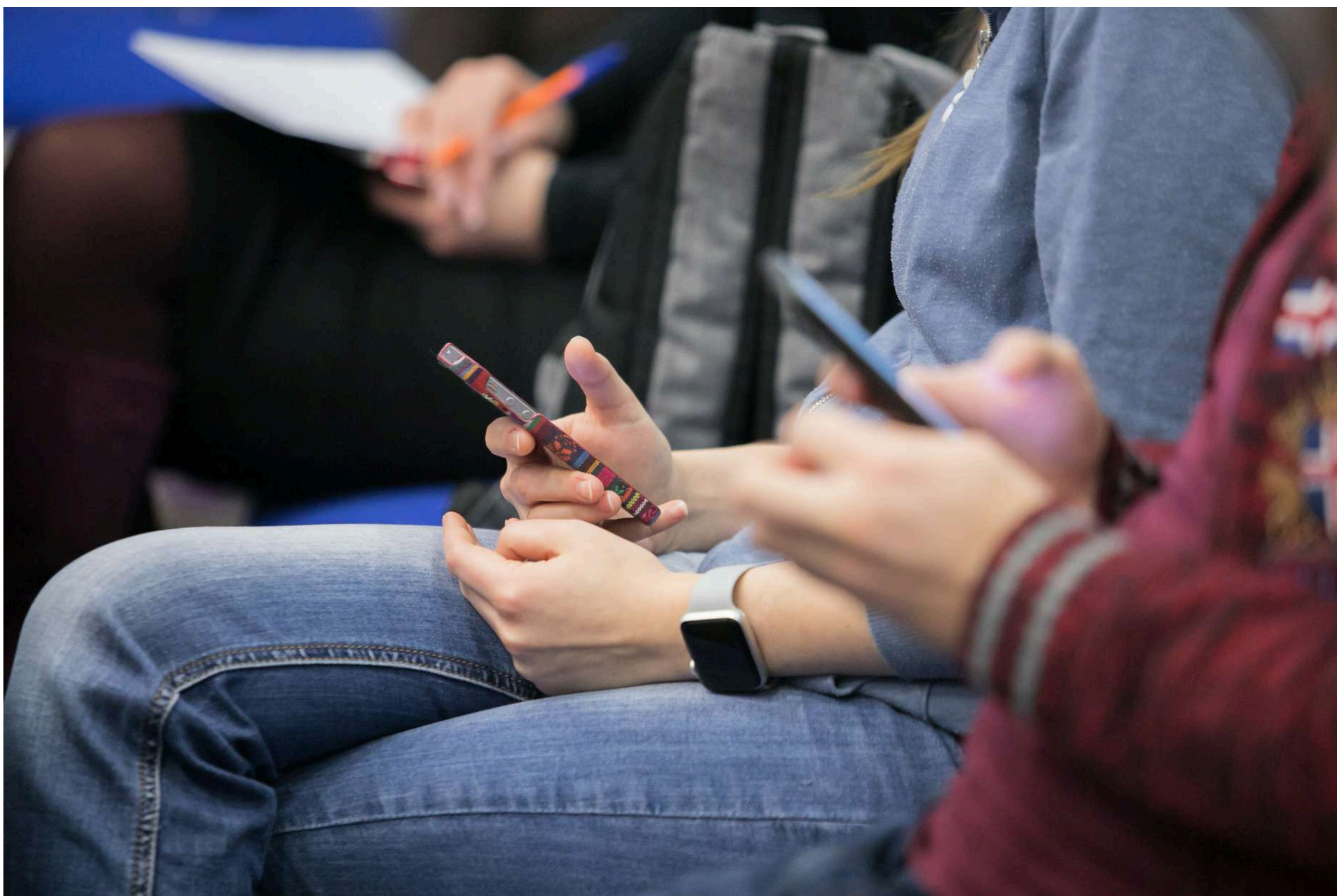
DO YOU REALLY NEED THAT MEETING?

Oh, the curse of too many meetings.

As #WFH brought the immediacy of Zoom into our lives, what used to be five-minute chats in the corridor can turn into 30-minute calls that no one feels comfortable terminating.

In our opinion, meetings need keeping under tight control;

- Clear agenda

- Efficient chair

- Agreed timeline

- Hard stop

TRUSTING YOUR TEAM

There is a lot of talk about trust but what does it mean?

Trust and autonomy are key pillars in determining employee engagement, performance and cohesiveness. That's the bit we get.

But is encouraging trust as much about your ability to let go (that delegation piece again), than you team's ability to work autonomously?

<u>What does trust mean to you and more importantly, what does it mean to your team and to individuals within your team?</u>

Are you holding on too tight with a lack of trust that's affecting performance and increasing churn?

THE 80/20 RULE (the Pareto Principle)

The Pareto Principle was introduced by Italian economist Vilfredo Pareto who stated that for many events, roughly 80% of the effects come from 20% of the causes.

He developed the concept in the context of the distribution of wealth among the population but the principle is very applicable when managing heavy workloads and tight deadlines, particularly for those with a perfectionist mindset.

Focus on what is absolutely necessary — what will give you your 80% - and delegate, defer or lose the rest.

With B2C products, think about speed, not perfection.

With B2B, get products out, build credibility and then fine-tune towards the perfect version of that product - which you may never reach … but it's a nice aspiration.

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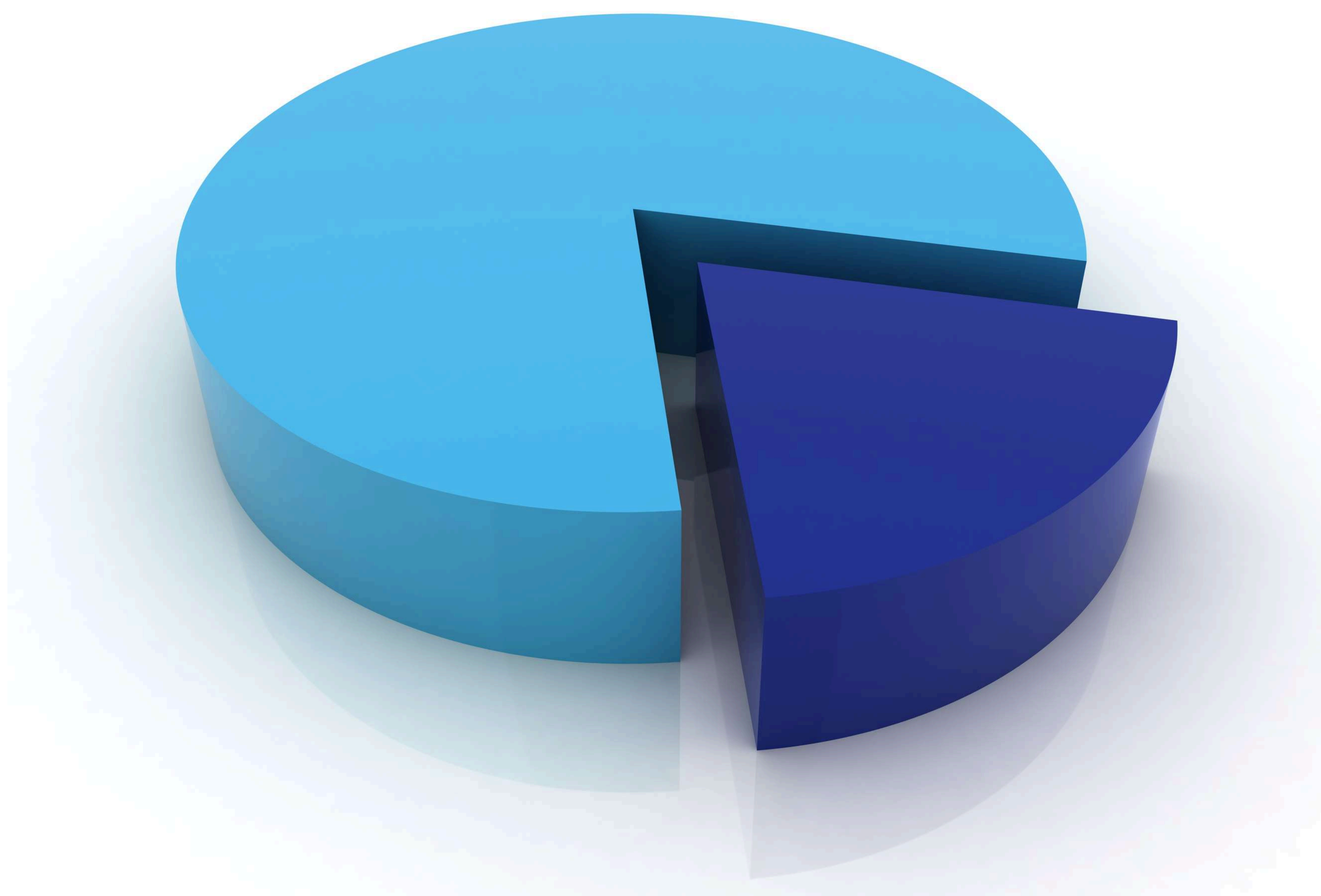
THE LEAN START-UP METHODOLOGY

We're fans of Lean Start-Up and believe it's applicable within large organisations, as well as start-up, scale-ups.

Too many companies build products that customers don't want or get. Their lines are developed in a silo away from the market, burning cash, time and morale.

Being lean and building on the basis of validated learning should be at the core of anything you create and the concept of incremental improvement and marginal gains, will accelerate market interaction and validation.

For example ...

When launching a new SaaS product, don't start with a fully formed product and expect subscribers to fawn all over it.

- Build lean.

- Start with manual product, lots of non-scaleable activity and market testing.

- Measure the results and start to respond/iterate accordingly.

- Validate (or not) each step of your build process.

- Iterate into providing it as a service.

- Then start the process towards productising it. Then, SaaS the hell out of it!

SECTION 3

BUILDING YOUR SOFT SKILLS

IT'S RARELY ABOUT THE TECH

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<u>Transitioning from the technical to the managerial</u> is about learning how to move from being a player to being a leader.

And one of the key lessons is that success in senior leadership roles is rarely about the tech. It's almost always about the people.

You must understand the nuances of stakeholder management as you interact with everyone from CEO to engineer, investor to customer.

Here are four steps to achieving that goal:

- Become different things for different people.

- Find the right balance between technology and people.

- Learn to communicate clearly with all stakeholders.

- Protect the team while preserving the interests of the organisation.

WHAT SKILLS DOES AN EFFECTIVE CTO NEED?

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How long have you got?
Let's start with these ...

- Good Technical Core
- Self Awareness
- Empathy
- Vision
- Resilience
- Humility
- Ability to Listen
- Growth Mindset
- Ownership
- Eye For Talent
- Creativity
- ... added bonus, is having an effective CEO, supportive executive team and money in the bank ... (Ed: now you're just getting greedy)

TAKE YOUR HANDS OFF THE KEYBOARD

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Most tech leaders can easily stay in the weeds.
It's what you've grown up with and where you feel safe.

But you can't stay behind the keyboard and simultaneously be an effective leader.
You have to learn to trust your team.
You have to learn to delegate.

MANAGE THE ECOSYSTEMS AROUND YOU

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One vital skill is understanding the ecosystems operating around you and how they interact (or don't) with each other.

When organisations get to 50-plus employees, you can be sure they're already suffering the effects of staff politics. Your task is to become adept at foreseeing and recognising the nuances of these dynamics.

Ask yourself:
- What department feeds off what?
- Which individuals bounce off which others?
- Where are the major players?
- How does everything fit together?
- Who are the hawks and doves within your organisation?
- What are the value drivers of your business?

HYBRID ROLE OF A CTO

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The CTO can't exist in a silo anymore. The job has become a hybrid, integrated with other senior roles.

You might be cross-pollinating ideas and tech with the CMO or staying close to the sales and customer services team to get a grip on market reaction.

Understanding (and negotiating around) how other teams operate in the business has become an important element of the CTO role.

THE ART OF NEGOTIATION

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If you're uncomfortable with negotiation then brace yourself for some discomfort, because the more senior you get, the more negotiation you'll have to deal with.

Remuneration, recruitment, budget, investors, employees, suppliers, department heads, partners at home as well as at work (personal experience speaking there) are just some of the areas requiring constant negotiation.

It can be a fun part of the job, but it is a skill that CTOs need to build through their career.

THE ART OF COMMUNICATION

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We often hear from customers about operational challenges and blockers, but more often than not what they're really talking about is poor communication.

A failure to communicate effectively is at the heart of many leadership issues.

You need to develop the ability to get your message across to all stakeholders and pay grades, using language that each audience will understand, particularly if they're non-technical.

That can include the customer. It often includes the CEO.

SECTION 4

MAINTAIN YOUR TECH SKILLS

NAIL YOUR CORE TECHNICAL SKILLS

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Effective tech leadership is driven by a mastery of the soft skills.

Your technical skills should be a given so this section doesn't aim to teach you anything new, it just provides a few hints about where to keep a focus.

CUSTOMER BEFORE COMFORT ZONE

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When is it best to build natively vs using off the shelf components?

Don't always use the same method and don't always use the one you know best.

The CTO needs to be flexible enough to understand and use the correct method for the situation, the client and the business.

MAINTAIN A RELEVANT UNDERSTANDING OF TECH

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What languages, frameworks, architecture and deployment are leading the way?

You don't want to lose a competitor advantage but likewise not flip to the latest trend because it is the latest trend.

Keeping the team relevent will keep them effective but it was also be easier to attract new talent.

DON'T FORGET YOUR LOVE OF TECHNOLOGY

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You may not have the time to get deep into the weeds but that does not stop you being passionate about your subject.

The foundations of computer science are still the same. Your role is to conduct and lead the team so that they can become the best of themselves. If you have lost your passion, then it will be very hard to motivate your team.

> Even though I do not have the time to delve deeper as I once did, I still love technology as much when I saw my first computer (ZX80) over 40 years ago.
>
> My whole career has been technology and I'm excited by all the different technologies that will be released in the next 10 years and beyond.
>
> *Jason Noble, CTO, CTO Academy*

KEEP THE LONG TERM VIEW

Technical debt can get overwhelming for any project. It can come down to several problems.
- Using the wrong technology
- Not keeping frameworks and languages up to date
- Over complicating the design for possible future proofing
- Not removing redundant code immediately

Front end development
Make sure libraries are up to date but with an eye on backward compatibility. If you have enterprise customers, their systems may not be updated frequently.

Databases
- Relational vs NoSQL vs time series vs something else?
- When should you put in clustered DB or geo-replicated systems?
- Understand these concepts so that you can migrate or upgrade your system as your business requires.

Backend technologies
Typically, your business will have already picked a framework but understanding the pros and cons will allow you to challenge the status quo when appropriate. Again make sure that frameworks are kept up to date and have thematic sprints which include cleaning and maintenance schedules for the whole application.

DON'T FORGET ABOUT QUALITY

Embed quality into your projects and teams from day one even if that is simply starting with manual testing and test cases.

Ideally move to test automation, unit testing and testing all executed on the CI/CD pipeline. Appreciate this can't all be done on day one and that your job is to prioritise when it's important to move to the next stage.
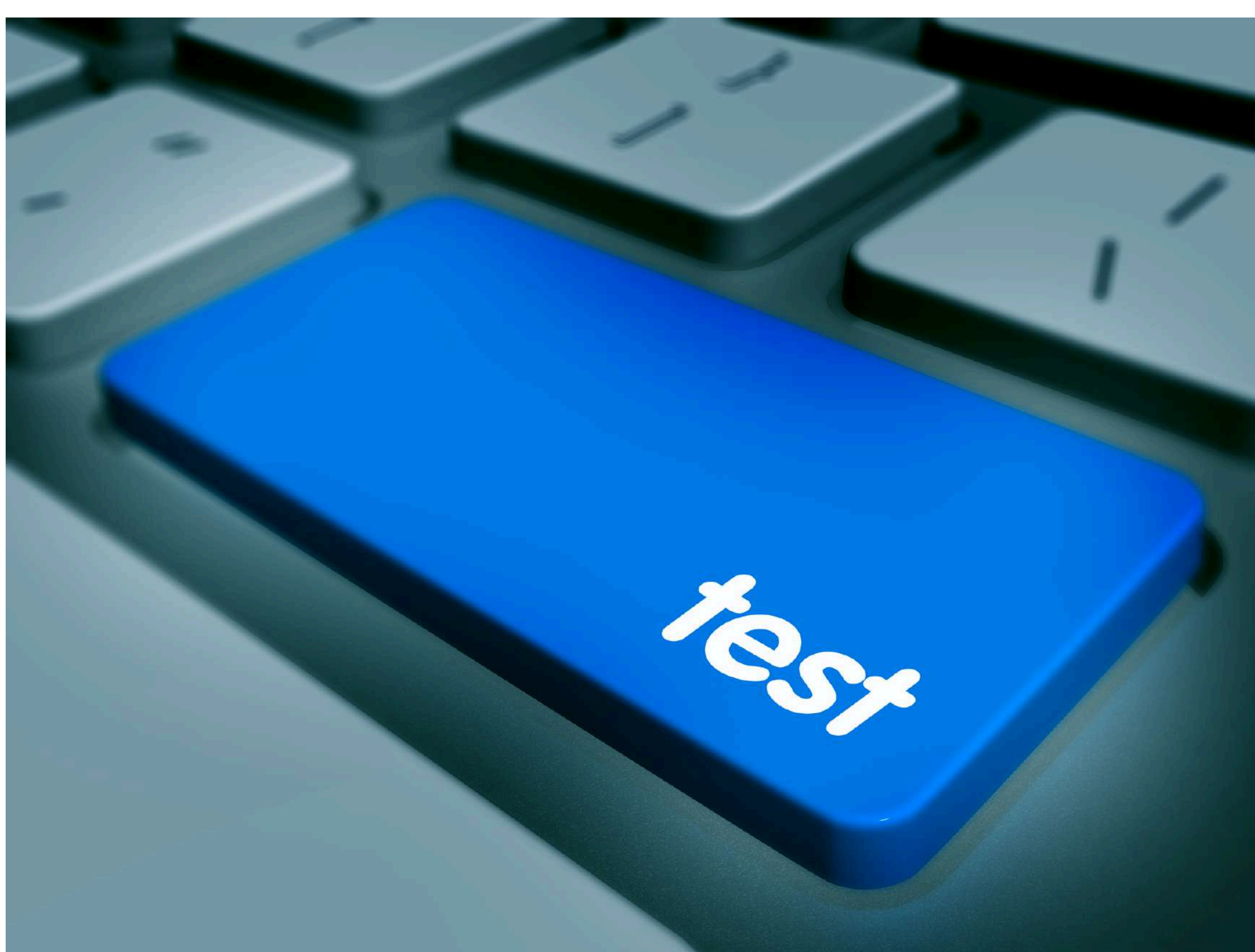
SECTION 5

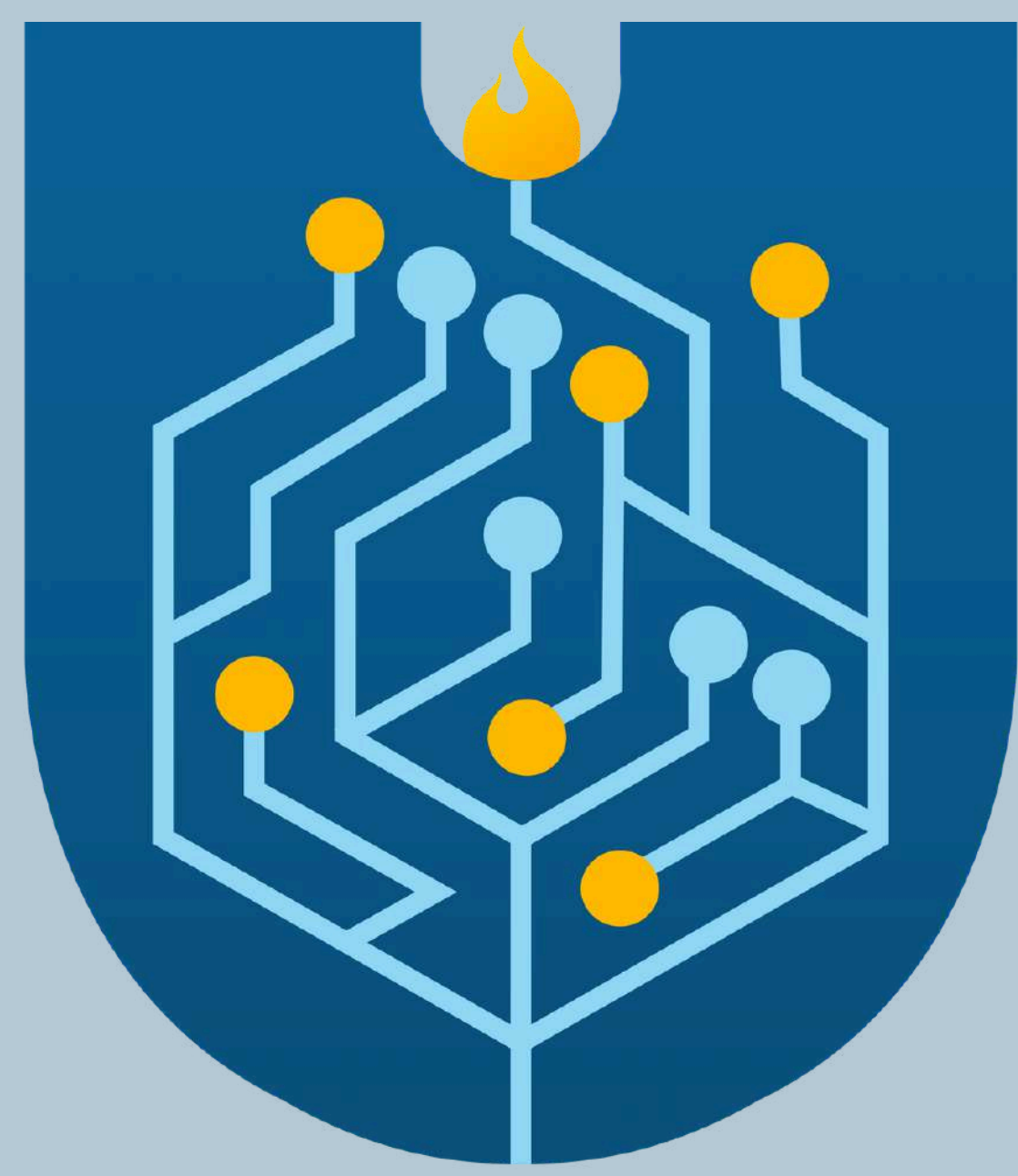# LEADERSHIP

WHY BECOME A LEADER?

The only answer that will get you where you want to go, is because you simply cannot **not** be a leader.

Your instinct to lead is so strong that it's part of who you are.

Leading for you is a process of personal development, a journey of fulfilment.

Leadership:

- Grows you as a person
- Gives you purpose
- Helps you make a difference in others
- If this vision doesn't resonate with you, then maybe you're pursuing the wrong path and need to redefine your values.
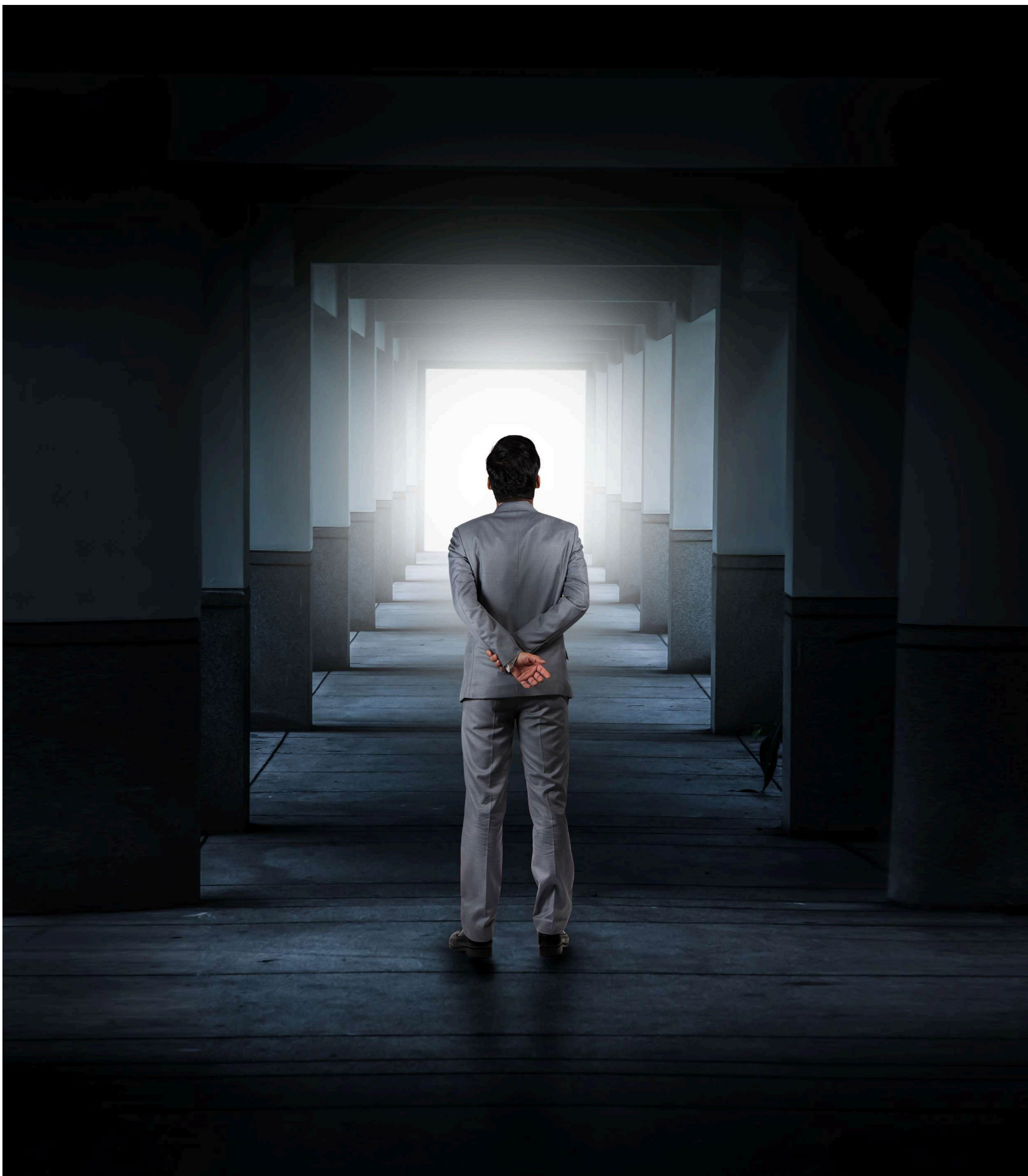
HIRE SLOW, LOSE FAST

<u>Hiring is one of the most challenging tasks for any manager or leader</u>, particularly when there is a fight for the best talent and compromises need to be made.

Keep fundamental rules in mind when building a high-performance team: hire the best people, even if they cost more.

If there's **any** doubt about hiring someone, then's there **no** doubt - don't hire them.

If a hire isn't working, end it quickly. Poor performing employees drain your resources and team morale.

You need to be clear about what you're looking for in terms of job specification, character and fit.

If your team culture is already established, recognising fit is relatively easy. But if you're recruiting for an early-stage business, you are helping to create that cultural DNA and you need to certain about what you want it to be.

The "guard rails" of company culture form quickly and are difficult to shift.
Encourage diversity by not employing the same type of people and proactively advertising in different types of channel.

Reach out as widely as you can. Narrow recruitment strategies lead to narrow teams and empirical evidence shows that's bad for market perception, innovation and profitability.

If you have an HR team, you probably don't need to follow relevant employment legislation when hiring and firing. But be aware that how your organisation handles both ends of the process will reflect on you and your brand.

And you certainly should know what is required if you are ever involved in a downsizing or redundancy process.

Companies rarely lose employment legal cases based on their original decision, but more often than not on a failure to follow correct procedure.

THE FAILURE-TOLERANT LEADER

"Success is stumbling from failure to failure with no loss of enthusiasm" — **Winston Churchill**

Failure is the prerequisite for invention.

A business can't develop the breakthrough product or process if it's not willing to encourage risk-taking and to learn from mistakes.

Failure-tolerant leaders strive to help employees overcome their fear of getting it wrong and, in the process, create a culture of intelligent risk-taking that leads to sustained innovation.

This type of executive doesn't just accept failure; they will encourage it. They engage at a personal level with the people they lead.

They avoid giving either praise or criticism, preferring to take a non-judgmental, analytical approach as they interact with staff.

They openly admit their own mistakes rather than covering them up or shifting the blame.

And they try to root out the destructive competitiveness built into most organisations.

Failure-tolerant leaders push people to see beyond simplistic, traditional definitions of failure.

They understand that as long as failure is viewed as the opposite of success rather than its complement, their team will never be able to take the risks necessary for innovation.

BUILD AN EFFECTIVE TEAM CULTURE

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Culture is set by the founders and grown by those leading the business. They establish the template, language, norms and the "guard rails".

Your role is to shape and adapt those elements into an effective team culture.
It needs to be inclusive, supportive and diverse.

Great teams emerge as a result of thoughtful and patient recruitment, bringing together talented people who are working towards a clearly communicated vision.

Your focus is on getting in the right people and giving them the confidence and autonomy that inspires them — and you — to exceed expectations.

THE BENEFITS OF AUTONOMY

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Researchers at Cornell University studied 320 small businesses, half of which granted autonomy to their staff and half relied on top-down direction.
There should be no surprise about the results.

The businesses that offered autonomy grew at four times the rate of the control-oriented firms and had one third of the staff turnover rate.

Hiring is a significant burden on your time and cost to the company, therefore retention is crucial in running a high-performance team.

For all the camaraderie of Friday drinks and endless games of ping pong, giving individuals the autonomy and training to thrive is about the best perk you can offer.

Having the confidence to manage in that way goes back to some of the earlier points about developing a growth mindset, allowing your decisions to be challenged, and giving others space to flourish.

Teams which play together do get to know each other better and this often is a key element for success and for battling through the tougher times.

Water-cooler conversations are important, even if small talk is not your natural habitat. With remote teams it's even more important to understand the personal as well as the operational. It's been interesting to hear how many tech leaders missed those daily interactions.

Try to keep daily stand-ups as a mixture of social and professional, as much about what a team member did last night, as what KPIs they're hoping to achieve this month.

People contribute more effectively when they feel valued and part of a wider story. Recognition enables them to dig in when times are challenging and will help reduce staff-churn. Show gratitude, often

"BUT IT'S ALWAYS BEEN DONE THIS WAY"

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Just because it has, doesn't mean it should.

This is a very common problem with established teams, lacklustre leadership and institutionalised practices.

There is a reticence about challenging the status quo. But not doing so can result in a staff stuck in a rut, lacking motivation, vision and incentive.

MANAGING THE DISRUPTIVE SUPERSTAR

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Watch out for loud team members who try to dominate.

From our collective experience there are two types of "loudness'.

Firstly, there's the "superstar developer" — the individual who you over-rely on and who can be a disruptive force because they know you can't easily do without them. This situation often arises when inheriting a team with poor legacy hires and/or weak management controls.

You need to employ a strategy that counters this risk, and one option is to double up.

Try to make sure that the knowledge is shared and that nobody becomes too important and therefore has too much power.

Secondly, you have the team member who has "all the gear, but no idea".

They pick up the latest wheeze from Wired or Tech Crunch, love to talk over others and dominate the discussion. But those who speak loudest often have the least value to add and need to be managed.

Be aware. Be inclusive. The way you manage disruptive team members can define your success as a tech leader.

VISION ALIGNMENT AND STAKEHOLDER SUPPORT

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KPIs and OKRs can play an important part in driving the business forward. But they can also take over, which is why vision alignment and stakeholder support are crucial.

You need to measure progress and success. But data and stats don't build the belief-system that make teams successful. That comes from a vision that everyone can focus on, a culture of respect and diversity that people want to be part of, and the support of key stakeholders.

These take time to build but they are the driving force behind achievement — which can be measured in due course.

MISSED DEADLINES / CLEAR COMMUNICATION

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This is a common issue that tends to get blamed on the technology team.

Deadlines are missed for a variety of reasons — for instance, because specifications were incomplete or key development personnel weren't available.

Growing companies can struggle to deliver on promises (particularly if the sales team have failed to manage expectations), so you need to communicate clearly and quickly the deadlines you believe are achievable. This will allow the rest of the business to make decisions on the basis of your clarity.

It's especially the case if you use third-party suppliers where you need to understand their road-map, development processes and reliability.

As a recent example, we had to deal with a data supplier whose quality of data was subjective at best, and whose delivery soon became intermittent.

Be aware of these issues and box them off before they become a problem.

CROSS POLLINATE DEPARTMENTS

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The tech team shouldn't be working in a silo - those days are long gone.

Building an organisation based on the cross-pollination of people, ideas and cultures is fantastic for motivation, wellness and performance.

It's not always easy or natural to break out from the tech bubble so it's important to encourage even small steps such as sharing food breaks and events with other departments and teams.

Don't just lean on technology to try and knit people together. Sometimes we spend too much time congregating on Slack rather than actually talking to people and getting to know them.

DIVERSITY IS ABOUT PRO-ACTIVE LEADERSHIP...

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Diversity breeds creativity and outside-the-box thinking. Evidence suggests the more diverse a company is, the more profitable it becomes.

And yet diversity is often treated as a tick-box exercise.

Some leaders hide behind the excuse that they tried to encourage diverse talent but struggled to find it. Make sure your recruitment process is not unconsciously (or consciously) maintaining the status quo.

Build a procedure that encourages diversity in a proactive way. If you've not found what you're looking for during the initial hiring phase, extend the timeline or look in different places.

TAKE RESPONSIBILITY

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This is not the same as being accountable.

Accountability is related to outcomes but taking responsibility as a leader goes much deeper.

It's about standing up to be counted.

It's about not offloading blame.

It's about providing support and encouragement when needed.

It's also about a mindset that removes you from being "one of the team" and lets you take charge and make key decisions.

Five steps to being a responsible leader:
1. You need to lead by example and be willing to commit as you'd expect your team to commit.
2. Leave room for your team to grow, take initiatives and responsibilities, observing them humbly from the outside.
3. Create opportunities for recognition of individual wins.
4. And give public recognition when deserved.
5. Do not be afraid to encourage individual growth, even if it means staff ultimately moving on.

THE ART OF LISTENING

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Enlightened leaders strive to be collaborative rather than controlling.

Only through engaged conversations over time can managers create failure-tolerant work environments that invite innovation.

This is not to say that a major achievement shouldn't be applauded, or that avoidable or repeated mistakes should be tolerated.

But astute managers mark the daily small successes and failures with an even-handed, open curiosity about the lessons learned and the next steps to take.

Active Listening is more central to this process than talking. Research on workplace creativity shows that it's not the individual employee's freedom as much as managerial involvement that produces creative acts.

No incentive can match the obvious appreciation shown by a manager's interest and enthusiasm. Mould-breaking leaders such as Thomas Edison, General Motors' Charles Kettering, the Watsons at IBM, and 3M's William McKnight were famous for schmoozing with employees — not second-guessing or criticising, but engaging in animated discussions about projects.

Nothing does more for productivity, morale, and employee retention.

"*Edison made work interesting,*" said a machinist and draftsman who spent a half a century working for the inventor. "*He made me feel that I was making something with him. I wasn't just a workman.*"

CREATE REALISTIC EXPECTATIONS

So much of what we do and how we communicate is about setting the right expectations, and then going all-in to over-deliver.

Managing expectations happens across different aspects of business:

New Hires: No matter how young your company is, you should have a well-defined on-boarding process that articulates key points, such as job specification, reporting lines, performance and behaviour expectations.

Probation Periods: These are particularly important when putting a potential new hire through a trial period. If you think they're a good fit and it's just about measuring their capability, set the bar at a level where you can encourage them to significantly over-deliver. This encourages to show what they're capable of, rather than putting too much pressure on performance.

Sales Team: How many times have you worked with a sales and marketing team who fail to understand the product properly and pave the way for customer disappointment by failing to manage expectations?

Board Meetings: Managing expectations at board level can be as simple as making sure colleagues have understood the state of play. If you fail to communicate clearly, you risk them leaving the meeting with false expectations of what's going to happen next. This is a particular problem when dealing with non-technologists. Make sure your colleagues are not just nodding in agreement, and that they understand what has been agreed.

The CEO: If there is one point of friction that regularly comes up with clients, it's the <u>CEO-CTO dynamic</u>. Characters can often very different so communication becomes challenging and expectations need to be managed carefully, particularly if you're working with one of those overly optimistic CEOs.

CRUCIAL CONVERSATIONS

Confrontations are never easy.

We cover this area within our course material but also recommend an excellent book called **Crucial Conversations** in which the authors outline a method for approaching conflicts when the stakes are particularly high.

They recommend focusing on facts, remaining calm, listening to the other person with respect and working to motivate them and bring about a change in behaviour.

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PRAISE GENEROUSLY AND SINCERELY

47

People love gratitude and it goes a very long way, particularly when building and managing a team.

It doesn't matter how far up the corporate food chain you go, a simple "thank you" or "well done" can work wonders.

Empathy is not just something you should reserve for your team. Be understanding of the stress that comes with roles across the company. No matter how senior or experienced or self-sufficient a colleague may appear; the benefits of showing them gratitude shouldn't be underestimated.

AVOID TENSION BETWEEN PRODUCT AND TECH

48

Positive collaboration yields smarter solutions that are faster to develop and test.

We often see tension between product and tech. You have to manage any divide and maintain a healthy and communicative bridge between two crucial departments.

OPTIMUM SIZE FOR A TECH TEAM?

TECH TEAM?

"Price's law pertains to the relationship between the literature on a subject and the number of authors in the subject area, stating that half of the publications come from the square root of all contributors. If 100 papers are written by 25 authors, five authors will have contributed 50 papers."

Applying Price's Law to team-building, it's our conclusion that you get diminishing returns with team sizes of more than 10 members.

Of course, it's rarely possible to grow a team to 10 and then stop!

Look at splitting a team once it gets to 12. How you split it will depend on the product, company and skills of the developers.

You might split by functional areas — with an e-commerce-type web application that could mean dividing the team into admin functionality and user functionality, with each taking back-end and front-end developers.

Alternatively, you could split by type of work, creating a front-end and a back-end team.

To prevent silos, you must ensure that each team talks freely with each other, as well as move members around occasionally to develop their skills.

TRAITS OF HIGHLY EFFECTIVE AGILE SOFTWARE AND PRODUCT TEAMS

> Many executives, managers and professionals want to join the agile movement, considering the favoured approach to software development as well as overall product development. At the same time, agile can't just be thrust on the organisation with the expectation of overnight, collaborative results. The people participating in agile teams need to be ready and motivated to achieve a successful workflow.
> -

The report found there were some ideal personality traits and work values that separate the winners from the stragglers:

- They think as disruptors, fighting the status quo
- They are agreeable and straightforward
- They are able to handle ambiguity
- They are close -- very close -- to the customer
- They are self-directed
- They take pride in the final product.

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For agile teams, "pride in the product (the outcome) sits higher than pride in the work (the process). Being proud means more than being happy with the work; it also means wanting to be associated with the product and taking ownership of its values and contributions."

It also boosts innovation.

WHY SOME LEADERS FAIL ...

Adapted from Napoleon Hill's motivational best-seller, *Think and Grow Rich*, here are 10 key reasons for manager failure

1. **Inability To Organise Details:** Efficient leadership calls for ability to organise and to master details. No genuine leader is ever "too busy" to do anything which may be required in their capacity as leader. The successful leader must be the master of all details connected with that position.

2. **Unwillingness to Render Humble Service:** Truly great leaders are willing, when occasion demands, to perform any sort of labour which they would ask another to perform. "The greatest among ye shall be the servant of all" is a truth which all able leaders observe and respect.

3. **Expectation of pay for what they KNOW:** Instead of what they DO with that which they know

4. **Fear of competition from followers:** The leader who fears that one of their followers may take their position is practically sure to realise that fear sooner or later.

5. **Lack of imagination:** Without imagination, the leader is incapable of meeting emergencies, and of creating plans by which to guide his followers efficiently.

6. **Selfishness:** The leader who claims all the honour for the work of their team, is sure to be met by resentment. The really great leader claims none of the honours because they know that most will be more committed by commendation and recognition than money alone.

7. **Intemperance:** Teams do not respect an intemperate leader. Moreover, intemperance in any of its various forms, destroys the endurance and the vitality of all who indulge in it.

8. **Disloyalty:** Perhaps this should have come at the head of the list. The leader who is not loyal to those around him/her cannot long maintain any trust and therefore effective leadership. Disloyalty marks one as being less than the dust of the earth, and brings down on one's head the contempt they deserve. Lack of loyalty is one of the major causes of failure in every walk of life.

9. **Emphasis of the authority of leadership:** The efficient leader leads by encouraging, and not by trying to instil fear in the hearts of the team. The leader who tries to impress with "authority" comes within the category of leadership through force.

10. **Emphasis of title:** The competent leader requires no "title" to gain respect from the team. Those who make too much over title generally have little else to emphasise. The doors to the office of a real leader are open to all who wish to enter, and without formality or ostentation.

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SECTION 6

IT'S NOT ALL CODING

DEFINE YOUR QA PROCESS

52

Make sure the QA process is put in place from day one and select an automated system that best fits your needs.

Automating testing will enable your product to grow safely and steadily and will be especially valuable when doing major changes or significant refactoring.

UNDERSTAND YOUR IP

53

Always be familiar with the company's intellectual property (IP) and which parts it owns outright.

IP is often where the core shareholder value is being increased so retaining ownership of what gets built is crucial.

Weaknesses in IP ownership sometimes emerge only at the due diligence stage when a company is fundraising or selling and that can be disastrous.

You need to make sure any agreement with an outsourced developer is explicit about who owns the IP. Further, if you set up a joint venture, it's vital to define ownership — all of which can easily be overlooked in the heat of the moment.

You need to be clear how to protect your rights and whether you need to consider applying for any patents.

AVOID REINVENTING THE TECH WHEEL

54

Identify where the value for the company is and concentrate on that.

Use what is out there and innovate on top.

Make sure what you work on is aligned to the strategic goals of the company

BUILD A DEFENSIBLE MOAT

55

Always look to build a defensible moat around your products to lock in value.

You need to make products sticky and difficult to remove or switch.

By doing so, you're cementing key value-drivers into the heart of your business. This can be done by providing integrations with your products and/or embedding them into everyday processes.

BE CAREFUL WITH CLOUD SERVICES

56

Understand the strengths and weaknesses of different cloud services i.e. that between marketing and reality! Be careful of lock in and creating technical debt.
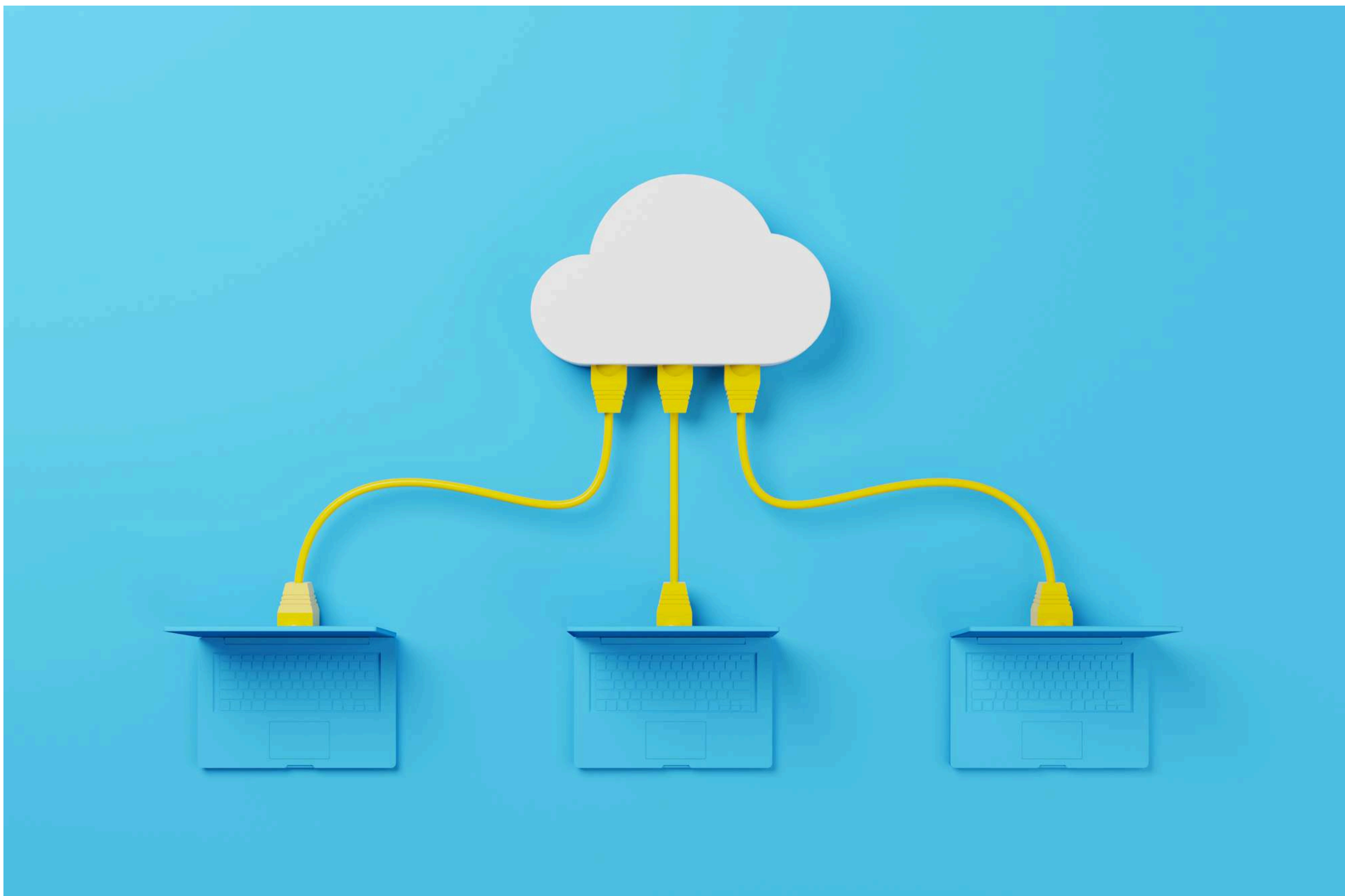
ADOPT THE KISS PRINCIPLE

57

Aka Keep It Simple, Stupid
Become adept at explaining technical stuff to non-techies and watch out for the body language or expression changes that suggest someone doesn't understand.
You need to be able to identify when someone is nodding in agreement, but doesn't really get it.

If they walk away having agreed to something they don't understand, the fallout might be on you and your tech team, not on them!

Remember, most people fail to retain more than three ideas per session. Don't overload them.

SECURITY & DATA

Security should **always** be at the forefront of your mind. There are several areas to deal with:

1. Security within your products (protecting user data)

2. Infrastructure security (who has DevOps access)

3. General company security (employee access)

4. Code security (who has access to code)

Users should only have access to what they need.

During the past 10 years cyber security has probably become the most business-critical topic for any tech leader, so ensure that you and your team have annual security training, even basic GDPR and cyber security instruction. Think about how sensitive data is stored and encrypted, and about access control.

Who SHOULD have access to data?

Just because you are the CTO, should you really have access to the production environment? Do you really support it?

Think about the data in your test environment - is this real data copied from the live environment? If so, is this environment secure? If not secure, does it need to be real data?

Get a third party to test the security of your platform. Carry out pen-testing, social engineering security testing, etc. Get a certified agency to do this at least once a year.

Do not panic over the results. Gaps are always found and this is good news as you can now do something about them. The key is to have a clear plan to fix any issue, with dates and owners. Put in temporary fixes for any problems at the top-end of the scale.

BUY vs. BUILD

59

Make sure your team is spending their time most effectively.

There is a natural assumption that you can build it, but always ask whether you can buy it instead?

As a CTO, the key is building what is core to your business, not your whole platform — i.e. if you're building a FinTech platform, then do you really need to provide your own CS app, BI portal, etc. Or can these be bought and plugged in?

Spend your development dollars very carefully so you can drive the biggest gains and outputs.

UNDERSTAND YOUR PLATFORM USP

60

Put your coding time, energy and resources into this part of your platform. Worry about the rest later.

PLATFORM LATENCY

61

Think about your users and latency. In an age when your phone's internet speed is comparable to your home broadband speed, platform latency should be a priority. Consider where your application is hosted?

Ask yourself:

Do you need to co-locate your software in different regions with your cloud provider?

Do you need to use Edge services?

Do you need to consider using CDNs?

LOW CODE

62

Low-code frameworks are becoming more pervasive (even though similar systems have been around for years).

Low code allows development of systems quickly and the restrictions are becoming less of an obstacle.

LEAN APPROACH

Pick a development methodology — Scrum or Kanban, etc — but always choose what is appropriate for your business at its current stage of development.

CTOs should ideally review and potentially change a methodology every 18 months to ensure it's still relevant.

Put in a change-and-incident process for your live environments.

Put in monitoring. Basic uptime monitoring using a third party is a minimum requirement. As you grow build in a third-party metric/monitoring system.

63

10 PAYING CUSTOMERS

Don't build anything other than a basic product, until you've got at least 10 paying customers.

When you've got 10 in the bag, survey them relentlessly. Find out what they do/don't like then start to accelerate development. But always have that lean start-up methodology in mind, building on the basis of validated learning.

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SECTION 7

COMMERCIAL & OPERATIONAL

GET STRATEGIC

You need to become overtly strategic in a senior leadership role.

You also need the ability to communicate a strategic direction to the team and inspire colleagues to deliver what they didn't think was possible.

You're likely to be the poster boy/girl for the technology and the futurologist for what's emerging on the tech horizon.

Your ability to judge genuine opportunity vs threat vs flash in the pan will be crucial to the growth and good health of the company.

65

LEARN THE ART OF COLLABORATION

Hone those collaborative capabilities, even with your competition.

Managers, particularly in early-stage companies, are often over-protective of "ideas", but that can be a misguided approach.

Get out there, disclose as much as you feel comfortable with, build relationships, don't over-protect what you have because you need to give, to get.

Don't be nervous about the competition. Watch them closely but reach out. Most markets are big enough for more than one of you and if you've hit on anything like a good idea then you're going to be surrounded by competition.

If you're in an early-stage company and/or fast-growing sector you're going to bump into each other quite often and most sectors go through phases of consolidation, where historic relationships can be useful when significant money starts to enter the space.

66

BUILD STRONG PARTNERS & TRUSTED NETWORKS

Partnerships can be an opportunity and a distraction. They can give you enormous leverage. But they can take time to set up, be difficult to integrate and promise more than they can deliver.

Start-ups tend to overestimate the potential, scale-ups tend to underestimate.
Any new partnership will need to provide mutual benefits and not just favour one party, or it will fizzle out quickly and have been little more than a distraction.

Be cautious about chasing partnerships that are not the right fit.

And be realistic about who you're trying to work with. Everyone wants to partner with Google but is it sensible to be chasing them at this stage of your evolution?

67

CHECK STABILITY & VIABILITY

68

Always investigate the stability and viability of any company that's providing your tech.

One area of particular risk, with such rapid technological change, is being dazzled by new kit and extravagant claims. It's easy to get locked into a nasty contract for a piece of kit that over-promises and under-delivers.

Ask yourself, how financially solvent are your partners and suppliers? You don't want to be investing a huge chunk of time and cash in a company about to go under.

It's not always easy to predict but it happens — that's business.
When dealing with new suppliers you need to conduct appropriate due diligence to be as confident as possible that you're dealing with companies who are not about to go bust.

SHARPEN UP YOUR SALES SKILLS

69

Sales is not a natural discipline for most tech leaders. It's not for us either.

But the modern-day CTO needs to be able to sell or at least have the competency to operate on the customer frontline, liaising with client technical teams and understanding market reaction, demands and requirements.

Customer retention can be the key difference between success and failure and part of the Customer Relationship Management ("CRM") process will be based on how you and your team deal with technical challenges and communication with clients.

KEEP CLOSE TO CUSTOMER SERVICES

70

The truly effective tech leader wants to understand everything about the customer and what they're thinking about the product.

Customer services are closest to the client, closest to market feedback and closest to what is bad about your product, because that's generally all they ever hear about. So, it's important to maintain good relations.

You and the customer services team have to deliver on the expectations created by the sales and marketing team. Look after them and think about when you last called a customer services department and showered them with praise.

THE ROLE OF MARKETING

71

Understand the part played by your marketing department and be able to critique their tactics.

Marketing is about garnering interest in a product or service to generate leads, but it almost always comes down to a numbers game.

A good marketing team aims to discover the most effective channel for your products by understanding the Customer Acquisition Cost (CAC) and Lifetime Value (LTV) for each.

This should enable them to assess the Return on Investment (ROI) for each channel and conduct a successful campaign on that basis. Well, that's the theory. In truth, not many marketing departments reach this level of insight and sophistication, rather spending much of their time throwing mud at the wall and hoping some of it sticks.

In some companies the CMO will have a larger tech budget than the CTO. They love their new data-analytic products in the marketing department.

For many of you close collaboration with marketing is necessary to ensure they understand the product and its impact on target customers.

NICE TRAFFIC, SHAME ABOUT THE SALES

72

Similarly, get close to the sales team and make sure no blockages on sales are caused by their lack of knowledge about the product.

How many of you have been frustrated by a sales team's ignorance of what they're selling?

Buyers need to feel that the sales people have credibility. And product knowledge is key to building that trust.

The sales team needs to deliver compelling solutions to prospects and a clear ROI case. If they try to BS the buyer about the product, the buyer will walk.

If product knowledge is lacking, you need to ensure there is a detailed training tutorial available and that those unable to deliver detailed impact models for clients are retrained or released.

BEWARE OF GROUPTHINK

73

This can become a real problem at the executive level where less technical members might be uncomfortable or embarrassed to question important issues. Executives need to challenge where others are afraid to speak out.

Try to ensure that people around you are not making business-critical decisions based on false assumptions.

WHO WANTS TO JOIN THE BOARD?

74

If someone is trying to join the board, question what value they bring to your organisation. What does it say about the direction you're taking?

Boards can become very unwieldy and some appointments are made on the basis of an old-boys network rather than real added-value.

"I definitely think 'Glenn' (replace name accordingly} will be a great chairman." Really. Why?

This is particularly an issue with early-stage companies where boards should be lean and effective.

You must be sure about what aspiring board members can provide. Introductions, network, market gravitas, fundraising capability? If it's cash, does that require a seat on the board?

Everyone needs to make a meaningful contribution - it's should never be about someone adding another 'Non-Exec' bauble to their CV.

UNDERSTAND BASIC FINANCE & ACCOUNTING

75

You might feel that balance sheets, CAPEX, OPEX and accounts are outside your comfort zone and they probably will be, but to operate at board level you need a basic understanding of business finance and management accounts.

Not least because as a director you have corporate responsibilities to uphold and need to have a grasp of the financial decisions being made on behalf of the company.

NEVER BADMOUTH YOUR SALES TEAM

76

Despite the above-mentioned misgivings about some sales teams, never speak badly about them because ultimately they're helping pay your wages!

SECTION 8

START UPS & FAST GROWTH COMPANIES

START A COMPANY AND INSTALL YOURSELF

77

The quickest path to becoming a CTO is to start you own company. Failure rates are high, though, so build up market experience and expertise before taking the leap.

Evidence suggests the optimal age for starting a successful start-up is 45.

Beware also the start-up founder who decides not to go for a technical co-founder. He/she is immediately making survival more difficult and it's highly likely they will hire a talented technologist but plan to keep them in subordinate role.

Don't be seduced by a fancy start-up title. If you're a key member of the team, if you're driving value, you should be sharing fully in the rewards.

If you're being asked to join an early-stage start-up, temper your excitement with some caution. It could be a life-changing opportunity where you learn more in six months than in six years working elsewhere. Then again... it could go pop overnight.

FIND AN AMAZING CO-FOUNDER

78

This is not always straightforward.

Being involved in an early-stage business is like being in a marriage, just more intense. It's easy going into the relationship, not so easy getting out.

What are the ideal qualifications for an amazing co-founder?

Personal chemistry: Do you like this person? It's an important question as you'll be spending a lot of time together.

Aligned commitment: Is he/she going to be distracted with other projects?

GSOH: Can you laugh together?

Complementary expertise: Are they the yin to your yang?

No ego: They need to leave theirs at the door

Resilience: Can they hack it? Will they stick with the project when the going gets tough?

Direct experience: What do they bring that will help the project?

UNDERSTAND HOW MUCH EQUITY TO GIVE/TAKE

79

You've joined a hot start up, you bring significant talent to the table, they want to pay you below market rate on the basis of an ambitious exit strategy and the potential of much jam tomorrow.

Is their ambition realistic? Do their numbers make sense? What is your opportunity cost and is the equity package sufficient reward for the risk?

It might look shiny and exciting on the surface but conduct a sense check on the people, opportunity, forecasts and deal being offered.

Working at below market value is no fun if the chances of a return are super slim, as is often the case in startups. You need to find the right balance.

DON'T STRESS ABOUT DILUTION ...

80

Dilution is often a concern for early-stage companies that have to purchase growth by giving away equity. You should be cautious because equity is very expensive, but as with most negotiations, it's often about timing and valuation.

Problems can emerge when start-ups raise money too early and at too small a valuation, so founders quickly get diluted out of existence and motivation is lost.

Growing fast and raising lots of cash does lead to a reduced equity position but hopefully you will be receiving a smaller slice of a much bigger pie.

Key to protecting your equity stake is to raise as late as possible at each stage.

Be realistic and sensible in negotiations with investors. Consider carefully valuations, founders' earnings and items such as anti-dilution clauses, an issue likely to lose investors unimpressed by any offer that creates shareholder hierarchies.

... BUT GIVE AWAY EQUITY AS LAST RESORT

81

If you are part of a founding team, give away equity as a last resort, particularly during the early days.

When you're starting out, equity is super, super, super expensive and valuations painfully low. Bootstrap as long as you can or find a co-founder with rich parents (see above).

SECTION 9

MINDSET & WELLNESS

NEVER STOP LEARNING

82

As we've said, those who lead, read.

Carve out quality time most days to read and absorb and learn.

Don't let work, pressure, team and other excuses distract you from this ongoing process of self-improvement.

Constant reading is not only good for your learning, it's great for your soul.

IT'S OK TO ASK FOR HELP

83

Strong leaders are not the ones who never require help, but the ones who know when and where to ask for it.

Successful senior executives acknowledge blind spots in their skill set and build a highly effective safety net around them, based on the following pillars:

- Encouraging expertise and recruitment of the best talent in support of your own aims.

- Understanding you can't do everything and even if you could, quality suffers.

- Creating a culture where vulnerabilities can be discussed.

- Not bottling up pressures.

- Leading by example.

HEALTHY BODY = HEALTHY MIND

84

The stress and strains of work, management, and leadership can impact your lifestyle and before you know it, bad habits become ingrained.

Don't ignore physical limitations.

It's very easy in a demanding role to put off your wellbeing to tomorrow but you are more than your new release!

Maintain a healthy lifestyle and control your consumption of the bad stuff.

You don't need health tips from us but here are some of the things our team does to relieve the stress:

- Use a fitness and step tracker (targeting 8,000 steps per day)
- Lunchtime cycle every other day
- Work standing for part of the day
- Use the stairs instead of the lift
- Not skip meals
- Book in a regular check–up (eyes, blood, etc)
- Run up mountains at 5am (according to our Richard … this is not universally accepted BTW)

SURVIVOR BIAS AND GRIT

85

Study how others did it, how they messed up, where they could have done better, what worked and what failed.

But ultimately it's down to you to interpret based on your unique circumstances. Most of the success stories you read about suffer from "survivor bias".

Their combination of factors were unique to them and might never happen again. You often see those who achieved success with one project struggle to replicate that winning formula again.

Ultimately most success comes down to consistent themes.
Mental toughness = Mindset, Resilience and Grit.

PIONEERS GET SHOT FIRST

86

It's good to be visionary and innovative but in the Start-up world in particular, it's not always sensible to be the first mover.

Anyone remember 3D TVs being the next big thing? The obvious flaw was that no one wants to sit with goggles on but, hey, that didn't stop the hype brigade getting into full OTT mode.

It's very easy to be tempted by the latest hot product.
It's very easy for members of your team to suffer the same.

It's why having a strong network and community will help as a sounding board.

Tread cautiously when planning to be a true pioneer. Assess new opportunities rationally, not emotionally.

Assess new opportunities rationally, not emotionally.

POSITIVE PSYCHOLOGY vs. TOXIC POSITIVITY

87

Which side of this fence are you on?

Positive psychology can be narrowed down to the motto "always look on the bright side", an outlook that searches for the opportunity hiding in any crisis.

If something has been bad for you, think of how you can turn it into a positive experience instead because being optimistic is not only healthy, but also a necessary skill in any leader's toolkit.

But looking on the bright side should never entail ignoring negative emotions and acting positive no matter the circumstances.

True optimism means you are able to recognise your emotions, embrace them and manage them towards a more positive perspective, as a result of your values-driven approach and general self-awareness.

However, we're also familiar with the "toxic positivity" culture which can skew the reality and create issues around mental and emotional health.

Don't get depression.
You can do anything and/or everything.
Never quit.

One can say they're inspirational, but the truth is they ignore all the contextual factors and leave you alone with your personal responsibility.

But luck isn't zero sum. The society we live in isn't zero sum.

When you are made to believe that you hold all the power, that you have total control, how are you going to feel once something turns out wrong, even if you have done everything right?

Perspective and balance remains crucial to effective leadership so cut yourself slack sometimes and remember, we all make mistakes.

ELIMINATE UNNECESSARY STRESS

88

Have you ever thought that you might suffer from stress that is completely avoidable? We are human and by nature imperfect.

If something is constantly causing you stress, then maybe this aspect of your life should be removed.

Life is too short and the CTO role too demanding to be burning energy on any unnecessary pressures in your life. So, every now and then, conduct an introspective stress audit.

Look at your commute, relationships, colleagues, time management, technology, social media use ... talking of which;

WEEKEND *Sans ecran*

89

Having worked with thousands of tech leaders since we launched in 2019, we know how stressful and demanding the role can be and we know how many of you take that stress and work home.

So we return to an earlier theme but with a French twist ...
Sans ecran is French for "without screen" ... a concept to "encourage" their teenagers to spend time away from their phones.

Aim for a tech-free space during a busy tech-based life.

LIVE IN THE PRESENT ... ALWAYS

90

We conclude with a simple message and that's to enjoy the now ...

Be ambitious, be hungry, be everything you want to be, but remember to appreciate each and every moment of your journey ahead.

"Realise deeply that the present moment is all you have. Make NOW the primary focus of your life"

What we offer at CTO Academy ...

Since launching in 2019 we've worked with tech leaders in 98 countries and from that we have built a nuanced understanding of the challenges they face when transitioning from highly technical backgrounds to the more hybrid skill set required in senior roles.

We've taken this understanding into creating our globally recognised executive leadership course and membership package.

Everything we deliver is driven by a mission to provide tech leaders with the leadrship insight and ammunition they need to achieve the career impact they want.

- **The Digital MBA for Technology Leaders** is an accredited executive leadership course that delivers a high impact blended learning experience via online lectures and live debates.

- **CTO Academy Membership** provides members with weekly live sessions, CTO Shadowing program and a range of resources, recommendations and free leadership courses.

- **Global Community of Technology Leaders** is a fantastic resource for members to lean into when they need some specific advice, guidance or just support that they're doing the right thing.

"CTO Academy is a brilliant platform and urgently needed as the CTO role becomes ever more central to the success of organisations and the need to bridge the technology with the commercial becomes more business critical" - Jim Mortensen, CTO/COO, USA

Website: https://cto.academy/

Email: hello@cto.academy

Twitter: @ctoacademy

Ready for the next step?   Explore More

And finally ... It's Rarely About The Tech

We conducted a series of candid interviews with senior technology leaders which included the following Q ...

What are the key attributes of a successful tech leader?

"Authenticity, humanity and empathy"
– Marcin Floryan, Director of Engineering, Spotify

"Empathy, an eye for talent, interest & an aptitude for technology and how, when it's applied with flair and creativity it almost always acts as a force for good. Anyone can read books but you need genuine empathy for the people around you. The ability to build teams is also critical. The cult of personality that builds up around some people is ultimately in the medium or long term quite destructive."

– Colin McQuade, Head of Technology, Barclays International

"Part of our job is to speak the language of the business and be an advocate for the technology on the board where maybe not everyone else is from a technology background. But technology has become as important as an understanding of finance or marketing or sales and not every CFO or CEO comes from that digital background. So it's important that we speak the language of everyone else and champion technology at that level and make sure we do put technology at the heart of the business"

– Ben Jones Group CTO, Growth from Knowledge

"I'm careful to make sure that I'm working with all the different team members at the different levels of engagement that they require and that I'm demonstrating through my actions that I have their best interests at heart while I do my best to marry their interests with the interests of the business. And if I do those 3 things, as well as I can, in relation to how I work with my team, that makes me a successful leader from the point of view of my team. Then from the point of view of my leaders it's really just about transparency and visibility as well as accuracy and detail"

– Jerome Pimmel, Software Development Manager, AWS

"I think these have changed. If it used to be; having a strong vision, hiring the right team, picking the right toolset. Nowadays it's more about; building the right ecosystem of partners, having the right platform to enable innovation. Those are the two things that senior tech leaders really need to focus on these days"

– Tim Hooley, Chief Technologist, EMEA FSI at Red Hat

"I'd say the key are human characteristics of creativity, risk taking, innovation and putting people first"

– Shilpa Shah, Programme Director, Deloitte Delivery

SOMETHING ABOUT THE AUTHORS

ANDREW WEAVER
CTO Academy Co-Founder

With 20+ years of C-level commercial and strategic experience, Andrew has launched, managed, fund-raised, bought and sold a range of businesses across sectors as varied as e-commerce, legal tech, property, travel & tourism, energy and professional services.

Alongside CTO Academy he also leads a Start Up accelerator in London and regularly mentors individual entrepreneurs at different stages of their journey.

With a Cranfield MBA, he focuses around non-tech topics like sales, marketing, strategy, fundraising, M&A, communications and business psychology.

JASON NOBLE
CTO Academy Co-Founder

The driving force behind us, an entrepreneur with extensive board level IT innovation and computer science experience, he has been technical director of several software businesses and managed large and complex enterprise projects with a number of successful exits.

Jason's wider interests and experience include geo-fencing, big data predictive analytics, machine learning, grid & high performance computing, complex algorithms, e-commerce, mobile, and high volume web applications.

ZOE FRAGOU
Organisational Psychologist & Leadership Coach

Organizational Development Leader, Culture Change Agent, Psychologist.and Leadership Coach. Zoe is based in Athens and is a trusted advisor with a strong executive-influencing presence, She works with corporates and individuals thriving in particular with driving transformative change as a key link between higher business strategy and talent management

SANJAY MISTRY
CTO/COO, Leadership Coach

Experienced in applying intelligent solutions engineering expertise in directing the design, development and launch of scalable and robust software able to manage over 20 million transactions per month, such as direct carrier billing applications and services for Infomedia. Sanjay is skilled in providing expert technical advice to both customers and colleagues on software design and development, from pre-sales consultation through to implementation and launch the in UK, European and Middle Eastern markets.

Richard Weaver
Head of Careers

Highly experienced recruitment professional with 20+ years industry expertise having delivered large technology and business transformation programme teams into Online, Broadcast and Telecommunication sectors.

Driven by a vision to transform the career development process by linking the user experience to our holistic approach of integrating recruitment with professional growth programs of learning and coaching.